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REMARKS

Claims 15-28 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for the reasons noted in the official action. The rejected claims are accordingly canceled and the subject matter rewritten as the above new claims, and are now believed to particularly point out and distinctly claim the subject matter regarded as the invention, thereby overcoming all of the raised § 112, second paragraph, rejections. The entered claim amendments are directed solely at overcoming the raised indefiniteness rejection(s) and are not directed at distinguishing the present invention from the art of record in this case.

The Examiner has indicated that the claims are incomplete for omitting essential elements which amount to a gap between the elements. In this regard, Applicant points out that new independent claim 29 is now directed solely to the determination of the density of the oil sample as determined proportionately from the measured differential oil pressure through the venturi pipe 9 (assuming a constant flow and no elevation change) and the determination of air content therefrom.

New independent claim 39 now includes both the determination of the density as well as the separation behavior of the oil sample where the separation behavior of the oil is determined according to measurement of the differential pressures over time, after the introduction of air into the oil sample has been stopped. This claim is supported by the specification at paragraph [011] stating in the last sentence, "With measurement of the differential pressure at repeated time intervals, the change of the density of the oil, that is, its variable air content and the air separation behavior, can be determined". As the independent method claims 40 and 41 include the same or similar limitations as claims 29 and 39, Applicant submits that for the same reasons as above that these claims now overcome the 35 U.S.C. § 112 second paragraph rejection.

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New claim 42 includes the specific steps relating to the measurement of all of the density, the separation behavior as well as the surface formation on the oil. These new claims are believed to overcome the Examiner's concern with respect to lack of relationship with regards to the body of the claim and the preamble where all of the elements of the preamble are now specifically recited in the body of the claim.

To address the Examiner's concern under each of the 35 U.S.C. § 112, second paragraph rejections as to how a measurement of differential oil pressure is related to determination of air content, as noted in paragraph [011] of Applicant's specification,

The venturi pipe produces differential pressures, due to changes in cross-sectional square area, that are proportional for the respective density of the oil. If the flow rate in the venturi pipe is known and the current flow is without elevation changes, then, from the measured difference in pressure, the densities of the oil can be determined and thus the air content.

It is well known that given the constant flow rate and no elevation change, there is a proportional relationship between the differential pressure across a venturi meter, or venturi pipe, and the densities of the oil.

The densities are of course determined according to the continuity theorem and the well known control volume equations relating to continuity, momentum and energy where the known flow rate is known and where losses are assumed to be zero, the energy equation is reduced specifically to Bernoulli's equation. As these equations and the basic proportionality relationship between differential pressure and fluid density is a well known aspect of fluid mechanics particularly in the context of venturi meters, the Applicant believes no further discussion is necessary.

With respect to the Examiner's concern regarding a lack of relationship of the body of the claim to the claims preamble, the rewritten claims are now believed to provide the necessary structural and functional connection between the preamble and the body of the

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claim. For example, new claim 29 recites, "A device (1), for determining the density and air content of an oil sample . . . the density of the oil sample is proportionally determined from the pressure differential across the venturi pipe and consequently the air content of the oil is determined".

Once the density of the mixed air/oil sample is determined, the relative air and oil content of the sample can of course be derived according to known densities of the oil and air initially introduced into the circuit. It is, therefore, quite an easy matter to determine the relative content of air in the oil once the density of the mixed air/oil sample is determined in the venturi meter.

In view of the above amendments and remarks, it is respectfully submitted that all of the raised § 112 second paragraph rejections should be withdrawn at this time. If any further amendment to this application is believed necessary to advance prosecution and place this case in allowable form, the Examiner is courteously solicited to contact the undersigned representative of the Applicant to discuss the same.

In view of the foregoing, it is respectfully submitted that the raised rejection(s) should be withdrawn and this application is now placed in a condition for allowance. Action to that end, in the form of an early Notice of Allowance, is courteously solicited by the Applicant at this time.

The Applicant respectfully requests that any outstanding objection(s) or requirement(s), as to the form of this application, be held in abeyance until allowable subject matter is indicated for this case.

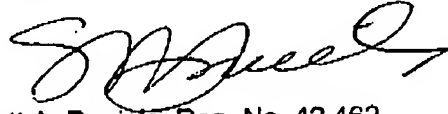
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In the event that there are any fee deficiencies or additional fees are payable, please charge the same or credit any overpayment to our Deposit Account (Account No. 04-0213).

Respectfully submitted,



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